

Method and Apparatus for Reducing the Storage Overhead of Portable Executable (PE) Images

ABSTRACT

A method and related apparatuses facilitate the compression of firmware modules that follow a portable executable (PE) format. An example method includes an operation of storing a firmware module in memory, wherein the firmware module follows a PE format, thus having subdivisions that include an MS-DOS header. The method also includes an operation of flattening the firmware module by replacing existing content within at least one field within the MS-DOS header with fill data that is more compressible than the existing content. For example, fill data may be loaded into an MS-DOS stub field within the MS-DOS header. Alternatively, the method may flatten the firmware module by ensuring that fill data occupies all fields within the MS-DOS header except for an lfanew field and an e-magic field. In some embodiments, additional or alternative operations to flatten the firmware module may be performed, such as loading fill data into one or more fields within an optional file header of the firmware module.